AMENDMENTS TO THE CLAIMS

For the convenience of the Examiner, all claims have been presented whether or not an amendment has been made. The claims have been amended as follows:

1. **(Currently Amended)** A method of detecting a computer virus, comprising:

emulating computer executable code in a subject file;

detecting at least one modification to a memory state of a computer system, wherein the at least one modification:

is caused by the emulation of the computer executable code; and

comprises insertion of a pointer to a viral exception handler, the pointer associated with a particular exception;

~~comprises installation of an exception handler or an interrupt handler.~~

and

detecting at least one instruction, wherein the at least one instruction forces the particular exception.

2. **(Currently Amended)** The method of Claim 1, wherein:

the at least one modification **further** comprises installation of ~~an~~ **the viral** exception handler~~; and~~

~~the emulated computer executable code comprises instructions for forcing a corresponding exception~~.

3. **(Currently Amended)** The method of Claim 1, **wherein the particular exception comprises at least one of the following:**

a divide-by-zero arithmetic operation;

an execution of an undefined computer instruction; and

a memory access to an undefined or illegal memory address. ~~further comprising:~~

~~detecting writing of a pointer to at least one predetermined address in a system memory for storing an exception handler pointer.~~

4. **(Canceled)** The method of Claim 1, further comprising:

detecting installation, in a system memory, of a pointer to an exception handler.

5. **(Currently Amended)** ~~The method of Claim 1, wherein:~~ **A method of detecting a computer virus, comprising:**

emulating computer executable code in a subject file;

detecting at least one modification to a memory state of a computer system, wherein:

the memory state comprises a particular interrupt associated with a legitimate interrupt handler; and

the at least one modification:

is caused by the emulation of the computer executable code;

~~the at least one modification~~ comprises installation of ~~an~~ **a viral** interrupt handler; and

associates the particular interrupt with the viral interrupt handler instead of the legitimate interrupt handler;

and

detecting at least one ~~the emulated computer executable code comprises instructions~~ **instruction, wherein the at least one instruction forces** ~~for forcing a corresponding~~ **the particular** interrupt.

6. **(Currently Amended)** The method of Claim ~~1~~ **5**, further comprising:

detecting writing of a pointer to at least one predetermined address in a system memory for storing an interrupt handler pointer.

7. **(Currently Amended)** The method of Claim ~~1~~ **5**, further comprising:

detecting use of a predetermined instruction to retrieve an address in a system memory corresponding to an interrupt descriptor table.

8. **(Currently Amended)** A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform **a** method for detecting a computer virus, the method comprising:

emulating computer executable code in a subject file;

detecting at least one modification to a memory state of a computer system, wherein the at least one modification:

is caused by the emulation of the computer executable code; and

comprises installation of ~~an~~ **a viral** exception handler or ~~an~~ **a viral** interrupt handler**;**

and

detecting at least one instruction, wherein the at least one instruction forces:

an exception associated with the viral exception handler; or

an interrupt associated with the viral interrupt handler.

9. **(Currently Amended)** A computer system, comprising:

a processor; and

a program storage device readable by a computer system, tangibly embodying a program of instructions executable by the processor to perform a method for detecting a computer virus, the method comprising:

emulating computer executable code in a subject file;

detecting at least one modification to a memory state of a computer system, wherein the at least one modification:

is caused by the emulation of the computer executable code; and

comprises installation of ~~an~~ **a viral** exception handler or ~~an~~ **a viral** interrupt handler.

10. **(Currently Amended)** A computer data signal embodied in a transmission medium which embodies a program of instructions executable by a computer for detecting a computer virus, comprising:

a first segment comprising emulation code to emulate computer executable code in a subject file; and

a second segment comprising detector code to detect at least one modification to a memory state of a computer system, wherein the at least one modification:

is caused by the emulation of the computer executable code; and

comprises installation of ~~an~~ **a viral** exception handler or ~~an~~ **a viral** interrupt handler.

11. **(Currently Amended)** An apparatus for detecting computer viruses, comprising:

an emulator component operable to emulate computer executable code in a subject file; and

a detector component operable to detect at least one modification to a memory state of a computer system, wherein the at least one modification:

is caused by emulation of the computer executable code; and

comprises installation of ~~an~~ **a viral** exception handler or ~~an~~ **a viral** interrupt handler.

12. **(Previously Presented)** The apparatus of Claim 11, wherein the detector component is further operable to monitor a system memory.

13. **(Currently Amended)** The apparatus of Claim 11, wherein the at least one modification **further** comprises installation of ~~an~~ **a viral** exception handler**, and further comprising detecting at least one instruction, wherein the at least one instruction forces a particular exception associated with the viral exception handler**.

14. **(Currently Amended)** The apparatus of Claim 13, wherein the ~~emulated computer executable code comprises instructions forcing a corresponding~~ **particular** exception **comprises at least one of the following:**

a divide-by-zero arithmetic operation;

a memory access to an undefined or illegal memory address; and

execution of an undefined computer instruction.

15. **(Currently Amended)** The apparatus of Claim ~~11~~ **13**, wherein the at least one modification **further** comprises writing of a pointer to ~~at least one predetermined address in a system memory for storing an exception handler pointer~~ **the viral exception handler, the pointer associated with the particular exception**.

16. **(Currently Amended)** The apparatus of Claim 11, wherein the at least one modification **further** comprises installation of ~~an~~ **a viral** interrupt handler**, and further comprising detecting at least one instruction, wherein the at least one instruction forces a particular interrupt associated with the viral interrupt handler**.

17. **(Canceled)** The apparatus of Claim 16, wherein the emulated computer executable code comprises instructions for forcing a corresponding interrupt.

18. **(Currently Amended)** The apparatus of Claim ~~11~~ **16**, wherein the at least one modification **further** comprises writing of a pointer to ~~at least one predetermined address in a system memory for storing an~~ **the viral** interrupt handler**, the** pointer **associated with the particular interrupt**.

19. **(Currently Amended)** The apparatus of Claim ~~11~~ **16**, wherein the at least one modification **further** comprises use of a predetermined instruction to retrieve an address in a system memory corresponding to an interrupt descriptor table.

20. **(Previously Presented)** The method of Claim 1, wherein the computer system comprises a first memory component and a second memory component, and wherein access to the second memory component is more restricted than access to the first memory component.

21. **(Currently Amended)** The method of Claim 20, wherein the **viral** exception handler or the **viral** interrupt handler attempts to modify the second memory component.